Aero Design Ltd.

Work Order Control Sheet

Work Order#: 2015-18 **Date Opened:** 18 Feb 2015 **Title:** Assembly

Aircraft OEM: Eurocopter **Aircraft Model:** AS350/355 **Product Type:** Cargo Basket Lid **Product Model:** Long **Quantity:** 1

Work Order Contents

	Initial or N/A
Work Order/Build Sheets (Procedures Provided)	JR
Additional Work Sheets (Standard Practice)	N/A
Drawings (See List Below)	JR
Parts Distribution Sheet	JR
Sub Component Tags	N/A
Completed Certification (Original)	N/A
Time Sheet (R&D)	N/A
Notes	N/A

Build Sheet Contents

	Initial or N/A
Tasks Initialled	JR
Dual Inspections Initialled	JR

Drawing List

Drawing #	Rev #	Description	Initial or N/A
78412	2	Lid Assembly	JR

Component Completion

	As Instructed
Quantity Complete on This Work Order	1
Quantity Incomplete on This Work Order	N/A
Further Processing Required Before Release	N/A
Release to Stock as Components	N/A

Certification

	Initial or N/A
Form One Completed	N/A
Serviceable (Green) Tag Completed	N/A
In Process (Yellow) Tag Completed	N/A
Unserviceable (Red) Tag Completed	N/A
Parts Tracking Tag (White) Completed	JR
Parts Placed in Stores for Distribution	N/A

Additional Documentation

	Initial or N/A
Documentation of a minor change	N/A
Non-Conformance Report Required	N/A
Service Difficulty Report Required	N/A

Billing

	Initial or N/A
Local (Aero Design)	JR
Research and Development	N/A
Third Party	N/A

Traveller

Work performed by:	Print: J Rekve for M Rekve	Sign:	SCA: AD01	Date: 20-Feb-15
ICC / Dual Inspection preformed by:	Print: Jason Rekve	Sign:	SCA: AD01	Date: 20-Feb-15
Work Order closed by:	Print: Jason Rekve	Sign:	SCA: AD01	Date: 01-Mar-15

AS350 LONG WITH WALKWAY (1)

CARGO BASKET LID FABRICATION - COMMON

2015-18

General

These instructions apply to all cargo basket lid assemblies. Refer to the following drawings, at the current revision, for dimensions and details:

Bell 206L/407 – Right side only
69812, Revision 3 – Standard Low Mounted Basket; Extra-Wide Low Mounted Basket
94612, Revision 0 – Extra-Wide Low Mounted Ski Basket
76612, Revision 0 – High Mounted Ski Basket

Eurocopter AS350/AS355 – left or right
77612, Revision 1 – Short Basket
69812, Revision 3 – Medium Basket (left and right)
78412, Revision 2 – Long Basket
94012, Revision 0 – Extra Large (ski) Basket

Robinson R44 – left or right
90612, Revision 0 – Standard Basket (left or right)

Bell 206B – right side only
80212, Revision 0 – Short Basket
80312, Revision 0 – Medium Basket
81112, Revision 0 – Long Basket

Bell 429 – right or left
95912, Revision 0 – Standard Basket

Bell Medium – left or right
75112, Revision 0 – Standard Basket
95512, Revision 0 – Extra Large (ski) Basket

MD600
82812, Revision 0 – Standard Basket

Options
70405, Revision 3 – Walkway
70402, Revision 1 – Lid Door

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

Work Order: 2015-18

Date Open: 18 FEB 2015

1. Rim Assembly – Basket Lid — APJ6
   a. Cut and fit ¾" x 0.035 material to fit rim jig, 45 degree ends.
      i. 1 or 2 lid prop bushing holes in short tube – refer to drawing
   b. Record material PO on attached material list.
   c. Remove writing on tubes with acetone and scotch bright.

2. Weld Rim Assembly — AD-05
   a. Record welding rod PO on attached material list.

3. Inspection — APJ6
   a. Rim for complete welds

4. Frame assembly – Lid — APJ6
   a. General
      i. Vent holes shall be #30 (0.129), and located inside the structure wherever possible to allow venting of weld gasses through existing holes (i.e. lid prop bushing)
   b. Insert rim from step 2 into jig.
   c. Cut and fit ¾" x 0.035 material, 21" long, for lid cross members.
   d. Record material PO on attached material list.
   e. Remove writing on tubes with acetone and scotch bright.
   f. Drill vent holes into rim to vent cross members into rim.
   g. Locate cross members in lid rim. Refer to drawing for spacing of cross members. Clamp cross members with C-clamps to jig.

5. Frame assembly – Lid with optional walkway modification — APJ6
   a. Fit cross members to rim in accordance with step 4.
   b. Attach walkway jig with C-clamps. Ensure correct orientation of rim, refer to drawing.
   c. Cut ½" x 0.035 material for walkway stringers to fit between lid cross members. Record material PO on attached material list.
   d. Drill vent holes into cross members at walkway stingers.
   e. Align walkway stringers on walkway jig using cleco clamps near both ends of each stringer, and clamp stringer to jig using a C-clamp in the centre.

6. Weld frame assembly. — AD-05
   a. Record welding rod PO on attached material list.
   b. Jigs must remain in place for as long as practical during welding.

7. Inspection — AR
   a. Frame assembly for complete welds.

8. Mesh assembly. ~~AD~~ C

   Note: 95912 (Bell 429) does not have mesh. Skip to step 10.

   a. Pull sheet of expanded mesh from stock. Record material PO on attached material list.
   b. Cut mesh to size for lid.
   c. Remove surface rust with scotch-brite.
   d. Ensure lid is prepared for mesh on the correct side.

9. Weld mesh to frame assembly per drawing. AD-05

   a. General welding requirements for all lids:
      i. Every intersection on all edges.
      ii. First 5 intersections along cross members, then every second intersection.
   b. MIG weld both short sides.
   c. Clamp lid over spacer at centre of lid to pre-tension mesh.
      i. ¾" for lids under 76"
      ii. 1" (check) for lids over 76"
   d. Weld remainder of mesh as indicated in a.
   e. Record welding rod PO on attached material list.

10. Weld lid components. AD-05

    a. Handle brackets, locate in accordance with drawing.
       i. Standard location: ¼" outside of last cross member on both ends.
       ii. Record handle bracket WO and welding rod PO on attached material list.
    b. Lid prop bushing(s).
       i. one or two in accordance with drawing.
       ii. Record lip prop bushing WO and welding rod PO on attached material list.
    c. Placard bracket. – not installed on 95912 (Bell 429)
       i. Locate on cross member to set bracket in centre bay of lid.
       ii. Record placard bracket WO and welding rod PO on attached material list.

11. Clean up ~~AD~~ C

    a. Grind high spots off mesh welds.
    b. Tighten mesh using special pliers. Tighten enough to remove "oil canning", where mesh springs in or out.
    c. Straighten lid using frame attached under welding table. Work carefully, avoid excessive force to prevent kinking rim tubes.
    d. Drill #9 through lid prop bushing(s). De-burr hole(s).
    e. Drill for lid bumpers using 1/4" (#3) centre drill.
       i. 3 places for lids under 76"
       ii. 4 places for lids over 76"
    f. Remove surface rust with scotch-brite pad.

12. Final Inspection

    To be completed by a different person than the previous steps.

    a. Basket lid assembly for complete welds, and required minimum mesh weld locations.
    b. Material lists complete.
    c. Overall condition and conformity to drawing(s).

13. Powder Coating
    a. Parts are to be powder coated white in accordance with commercial practices.
    b. Record powder coating PO.
    c. Inspect powder coating on receiving.
    d. Tag lid assembly and place into stock in preparation for assembly.

Work Order: 2015-18

Date Opened: 18 FEB 2015

Material Tracking Sheet
Eurocopter AS350 / AS355
Long Lid Fabrication

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
			78412-01	**Lid Assembly**		
Step 1				*Rim Assembly*		
	. 2		--	3/4" Tube - Long Rim (93.25")	4130 Steel, ¾" x 0.035 Sqr. Tube	~~14076~~ 14076
	. 2		--	3/4" Tube - Short Rim (22.5")	4130 Steel, ¾" x 0.035 Sqr. Tube	14076
Step 2				*Weld Rim Assembly*		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	14028
Step 3				*Inspection - Rim*	*None*	
Step 4				*Frame Assembly*		
	. 4		--	3/4" Tube - Cross Member (21")	4130 Steel, ¾" x 0.035 Sqr. Tube	14009
Step 5		70405		*Option: Frame Assembly - with walkway*		
	. 8		--	1/2" Tube - walkway	4130 Steel, ½" x 0.035 Sqr. Tube	14033
Step 6				*Weld Frame Assembly*		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	14028
Step 7				*Inspection - Frame Assembly*	*None*	
Step 8				*Mesh Assembly*		
	. 1		--	Mesh (lid - 92.5" x 22")	3/4-16F Expanded Mild Steel sheet	11032
Step 9				*Weld Mesh*		
	. A/R		--	Welding Rod	ER70S-6 MIG Wire	14028

Work Order: 2015-18

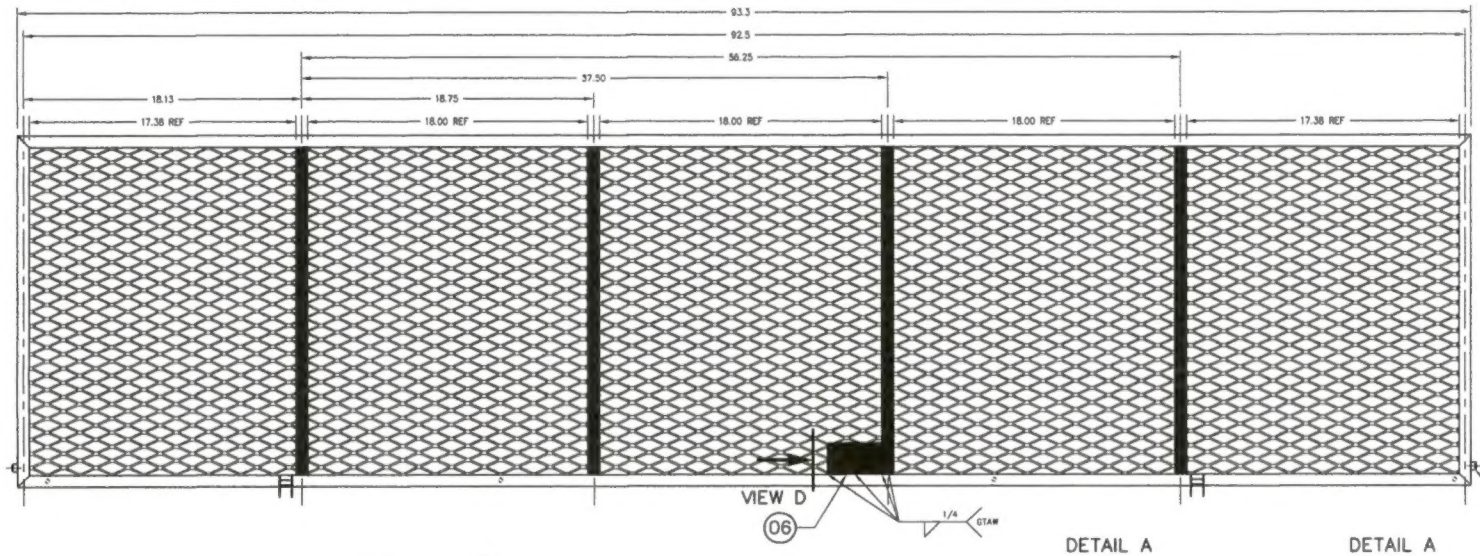
Date Opened: 18 Feb 2015

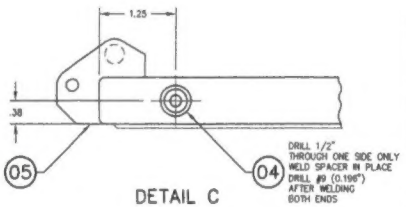
Material Tracking Sheet
Eurocopter AS350 / AS355
Long Lid Fabrication

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 10				*Weld Lid Components*		
	. 1	84262	84262-01	Upper Handle Bracket Assembly		
	. . 4		36273-01	Lid Bracket	321 Stainless, 0.050 Sheet	2014-38
	. . 2		36275-02	Support	304 Stainless, 5/16" Rod	
	. A/R		--	Welding Rod	ER308L TIG Rod	14028
	. 2		49216-01	Spacer (Lid prop)	304 Stainless, ½" Dia.	2014-07
	. A/R		--	Welding Rod	ER308L TIG Rod	14028
	. 1		36204-10	Placard Bracket	1018 Steel, 0.035" Sheet	2014-81
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	14028
Step 11				*Clean Up*		
Step 12				*Inspection - Final Assembly*		
Step 13				Powder Coating		

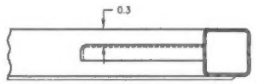
2015-18

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	CHANGED HANDLE BRACKETS, REMOVE ALTERNATE LID	BJC	28 JAN 10
2	TITLE BLOCK UPDATED; 84282 CHANGED TO 84283; WELDING ROD UPDATED; # OF WELDS DOWN BRACE TUBES INCREASED; REFERENCE DIMENSIONS ADDED	BJC	10/07/2014
	1/4" HOLES FOR BUMPERS ADDED; VIEW D ADDED		

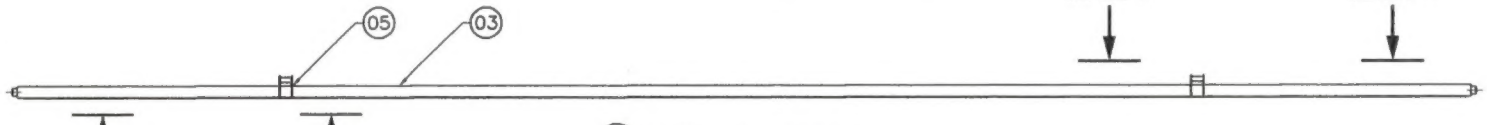




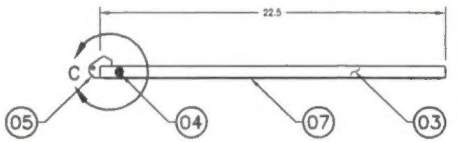
DETAIL C
SCALE 1 : 1

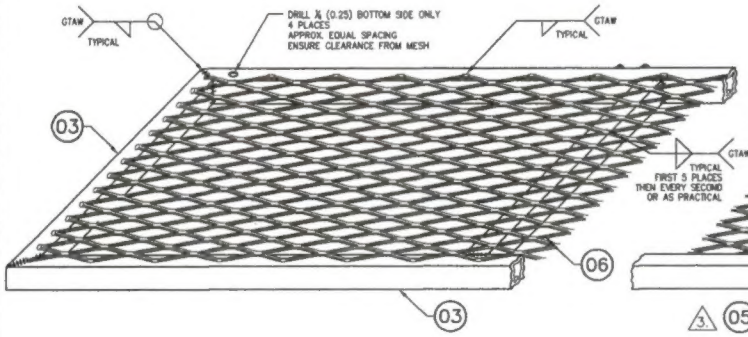


VIEW D
SCALE 1 : 1

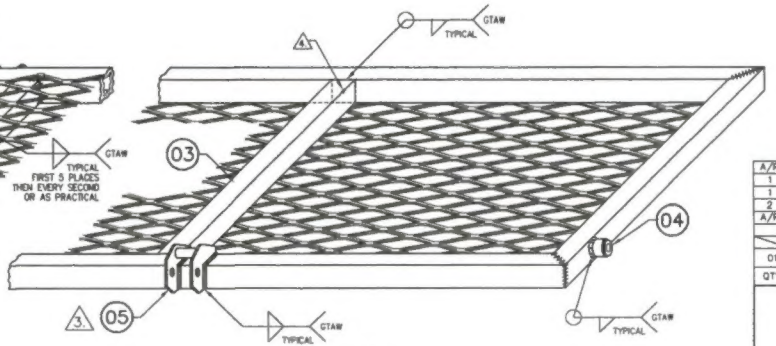


01 BASKET LID ASSEMBLY





DETAIL B
LOOKING AT BOTTOM



DETAIL A
LOOKING AT TOP

NOTES:
1. REMOVE ALL BURRS AND BREAK SHARP EDGES.
2. WELDING OF 4130 STEEL TO BE COMPLETED BY GTAW METHOD TO AMS 2685C.
   4130 AND 1018 STEEL: WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.
   STAINLESS AND 4130 STEEL: WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT.
3. INSTALL ITEM 5 (LID HANDLE PROVISIONS ASSEMBLY) IN ACCORDANCE WITH AERO DESIGN LTD. DRAWING 84283.
4. DRILL ø30 (0.129) HOLES IN LONG TUBE MEMBERS AT BRACE LOCATIONS TO VENT WELD GASSES. WHEN ASSEMBLY IS COMPLETE, FILL ALL EXPOSED VENT HOLES WITH ROSETTE WELD.
5. FINISH: THOROUGHLY CLEAN AND POWDER COAT LID ASSEMBLY.

QTY	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
A/R	3/4-16F	07	MESH			
1	36204-10	06	PLACARD BRACKET			
1	84283-01	05	LID HANDLE PROVISIONS ASSEMBLY			
2	49216-01	04	SPACER			
A/R	--	03	SQUARE TUBE	4130 STEEL COND. N.	MIL-T-6736	3/4 X 0.035 SQR TUBE
		02				
	78412-01	01	BASKET LID ASSEMBLY			

LIST OF MATERIALS

APPROVALS		DATE
DRAWN:	R. RATHWELL	19 FEB 08
CHECKED:	E. BURGOIN	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ON:
DECIMALS X.XXX ±0.010, X.XX ±0.03, X.X ±0.1
ANGLES ±1/2°

AERO DESIGN LTD.
9888A MALASPINA ROAD
POWELL RIVER, BC, CANADA, V8A 0G3
TEL: 604.485.5276 www.aerodesign.ca

EUROCOPTER AS350 & AS355 SERIES
QUICK RELEASE CARGO BASKET
BASKET LID ASSEMBLY (LONG)

SCALE	DWG. SIZE	DWG. NO.	REV.
1 : 4	A1	78412	2

SHEET 1 OF 1

Aero Design
Parts Distribution Sheet

WO# 2015-18

From PO or WO #	Quantity	Description	Part Number	For WO #
		See build		
		sheets		